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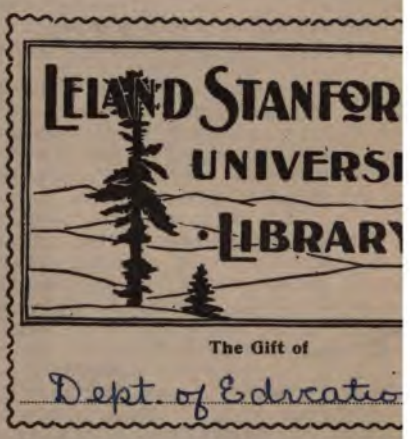

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TIEDEMANN'S

Record of Infant-Life.

AN ENGLISH VERSION

—OF THE—

French Translation and Commentary

—BY—

BERNARD PEREZ,

AUTHOR OF THE "FIRST THREE YEARS OF CHILDHOOD."

WITH NOTES,

—BY—

F. LOUIS SOLDAN, PH.D.

PRINCIPAL OF THE NORMAL AND HIGH SCHOOLS, ST. LOUIS, MO.

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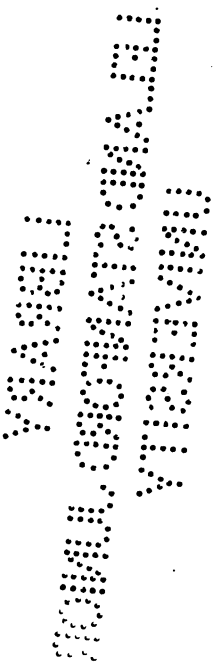

PREFACE.

This essay is remarkable both on account of its contents and of the influence which its publication in France has had on the study of Childhood. It is a reproduction of a little work by a German writer, which, I think, was written about 100 years ago, but was completely forgotten until a French translation of it appeared in 1863, in the *Journal Général de l' Instruction Publique*, by Mr. Michelan. This translation attracted much attention, and seems to have given the first impulse to a number of most remarkable monographs on the development of Childhood. I am by no means sure about the identification of the original author. The French version calls him "Thierry Tiedemann," and Egger says that he was a physician (cf. *L' Intelligence, etc., chez les enfants*, p. 7), but for a number of reasons I am inclined to think that the author is Dietrich Tiedemann, 1748-1803, a professor of philosophy at the German University of Marbury, and that these observations were completely recorded in 1781. If this surmise is correct, the child here described is Friederich Tiedemann, later professor at Heidelberg, and famous as a writer on anatomy and physiology.

Tiedemann's Record of Infant Life.

First Month.—Beginning with the earliest days, Tiedemann observed various movements and acts which he attributed to instinct and to a predisposition of the organic mechanism. The day after his birth the infant sucked the finger of his nurse; yet he never sucked continuously except when something soft tied in a cloth was put in his mouth. The eyes at this early day moved in all directions, but were directed with a preference toward things that were in motion—a fact which is more general with newborn infants and even with animals (although they may still be blind) than Tiedemann thinks. The movements of the body to escape the pressure of the swaddling clothes, or to escape pain in general, or to alleviate it through distraction, or to abate local irritation resulting from the accumulation of

blood in certain places—all these movements, useful but uncertain, are accounted for by our philosopher, as we should do ourselves, as being irresistible impulses of the organic mechanism, which resemble intentional actions. Tiedemann, very properly, however, raises the question, whether there is not already mingled with them a personal intention and acquired knowledge. I should answer this question as he does, in the affirmative, notwithstanding the fact, that in our days the widest scope is allowed for reflex and unconscious action in the mental phenomena of the adult and still more in child.*

It is repugnant to me to think of a child as a mere machine. From my stand-point,

* Rousseau, who has well expressed the principle upon which child-psychology should rest, by cautioning us not to seek the man in the child, but to think of what he is before he becomes man, said that the newly-born infant, fettered by imperfect and but half-developed organs, is a purely sensuous being who has not even the feeling of his own existence and with whom cries and movements are absolute mechanical effects, destitute of knowledge and will.

Charles Darwin has collected more exact facts in regard to reflex-action among children, than any other naturalist and psychologist. Among the reflex-actions noticed during the first days he mentions: sneezing, hiccoughing, gaping,

therefore, I can see even in the infant's first day "a beginning of instruction." I take exception, however, to the circumstances which seemed to Tiedemann to demonstrate the fact just mentioned; thus he says that when the infant has been suffering hunger, "in or to appease it, he seeks to put into his mouth, frequently without success, his fingers or those of strangers when he happens to take hold of them....The child knows that when something is put into his mouth hunger is appeased....He knows how to find the place where hunger and thirst make themselves felt, no matter how inexperienced he is in the movements of his arms and hands with which he tries to reach it. It is certain that it is neither on the ground of instinctive design, nor through the effect of personal experience, that the child is able during his first days to localize exactly pleasure or pain, and as little can he distinguish the parts of his body.

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stretching the body, and, of course, sucking and crying; and also at the same period the fact that the desire to suck was occasioned by coming in contact with a soft and warm hand. He also classes with those reflex-actions which are altogether independent of experience, the winking of the eyes, which, during the first two weeks, is caused by the hearing of certain noises.

Tiedemann gives sufficient explanation for the movement of the fingers when they close themselves over an object which has been put in contact with the palm of the hand; there is no intention involved in this mechanically performed action "by which the infant's fingers close like the leaves and flowers of some of the sensitive plants when they suffer the contact of some strange body." During the first days Tiedemann observes also "certain efforts to withdraw the feet when the sole was lightly touched," a movement which he notices without explaining it, but which he attributes probably to the instructive mechanism.

At this epoch "there is no trace of any smile; there is no manifest power of discrimination of the gustative and none whatever of the olfactory sense.* The explanation of this perhaps inexactly observed fact which Tiedemann gives, is rather hazardous. It is due to the circumstance he says, that "our

* Translator's note: This is by no means corroborated by later and more exact experiments, like those of Kussmaul for instance, which prove conclusively that the gustatory sense does possess the power of discrimination even in newly born infants; cf. Kussmaul, *Seelenleben der Neugebornen*; p. 19; Preyer, *Seele des Kindes* p. 75.

simple sensations, although their discrimination is very easy, need exercise and imply the possibility of comparison in order to become capable of distinct and precise observation." All I can admit is, that they require exercise, which, together with nutrition, strengthens the organs and adapts them more and more to their functions. But, are we to suppose that the child must have a certain number of experiences and opportunities for comparison in order to be able to distinguish the bitter from the sweet?

Tiedemann, with whom in this respect later observers, especially Darwin, do not agree—notices laughter after the fifth day, and attributes it not to an apparent motive of pleasure, but rather to a simple effect of the organic mechanism, in the same way in which he attributes exclusively to the irritability of the organism those sounds and movements which are produced during sleep at this time of life; he does not admit that the infant dreams during the first days. This last hypothesis has never been verified by anybody, although it would be worth while. Our philosopher—and that is a proof

of his sincerity—is as ready in some respects as he is slow in others to accelerate the progress of intelligence and sensibility in the infant.

On September 5th, or 13 days after birth, the child showed some traces of acquired ideas in the simplest sentiments and sensations of the soul. He rejected some medicines after having tasted several doses; he distinguished them from his food by the smell and by the mode in which they were offered to him; the progress of comparison had been very rapid! Eyes and features displayed already the expressions of grief and joy; one could preceive the sustained attention with which he followed the gestures of those that were speaking (evidently an exaggeration); their words had an effect on his crying; * * *

"All this proves," says Tiedemann, "the presence of ideas which he had already gathered, the distinction of creatures resembling himself from all other objects, and a more exact distinguishing of sensations." All these observations are inexact or at least badly interpreted; for it is indeed not easy

to explain the nature of mental phenomena in the child or in the animal, to indicate their point of departure, whether mechanical or conscious, and their true connection and development. I am raising at present a kitten which is about a week old and which presents to my observation facts which are analogous to those described above by Tiedemann, and in regard to which it would be contrary to every scientific method to refer them to pure sensation, to mechanicism, to instinct, or to hereditary reflex-action. During more than three days it seemed pleased when I passed my finger over its head and neck, and cried in a terrified or plaintive manner when it was taken hold of with the whole hand. Although its eyes are closed it moves its paws, which it nibbles, and pushes them forward to touch its mother; it does all this with the appearance of an attempt at play; my caresses to-day called forth a purring as soft as the humming of a bee. If all actions are unconscious, at what time shall we begin to believe in the indications which manifest consciousness? But it would be too much to attribute full consciousness to these actions.

Eighteen days after Frederic Tiedemann's birth, the observations already enumerated seemed to be confirmed by some new circumstances. The infant placed himself in attitude for taking nourishment whenever he felt a soft hand upon his face, ceased to cry, and sought the breast. Tiedemann sees in this an association of ideas which have already become somewhat fixed. But while the child could distinguish diverse sense-impressions, his ideas in regard to his body and to distances "were defective or even lacking: when his hands were left free he would strike or scratch himself so that it would hurt him." The ideas of which Tiedemann speaks here were not defective, but lacking.

Second Month.—After a month and three days, owing to painful experiences, and, doubtless, to an increase of strength, "the child would strike or scratch his face less frequently." "Sleep would be less long,"——which explains itself very well from the increase of physical activity, but which with a child of this age may also be due to any other cause, for instance, to insufficient nu-

trition. At this period also the child smiled* in mien and gesture, whether on account of taking pleasure in the variety of his movements, or whether sympathy had something to do with it, and this seemed to Tiedemann to receive confirmation from the fact, that "when the infant is spoken to, it likewise seeks to produce sounds, simple indeed and without articulation, yet varied enough.† At

* Darwin did not observe a smile (which is, according to him, the first stage of a laugh or a vestige of the old and inveterate habit of expressing joy by a laugh) until the forty-fifth or sixth day. Moreover, his children laughed when they looked at their mother while she was smiling, which makes him suppose that the laughs were of mental origin. I am led to think that this was a purely mechanical act, a pure sensomotor reflex-action. Laughing, in its most general features, seems to me to be the characteristic of joy with several mammals: it is impossible to misunderstand the laughing physiognomy of dog or cat at play. But, as is the case in crying or in walking, those transmitted hereditary movements which culminate in a laugh, require gradual exercise and must soon be controlled by consciousness in order to attain their normal development. According to Mr. Egger, laughter is not an instinctive action; it is not found in animals; and when it appears in the child it is due to the fact that sensations of the soul begin to mingle with bodily sensations; only after the fortieth day laughter and tears manifest the unfolding of faculties which until then were latent in the soul. Thus where Darwin sees the results of a development of organs, Mr. Egger recognizes the effects of a power which now has appeared in the soul.

† Darwin noticed toward the sixth week the soft murmur expressive of joy, which is a beginning of recognition and

a month and five days, Tiedemann thought that he could notice with certainty some

which, even before the movements of his little arms, is for the infant a means of carrying on a conversation with his people. "When forty-six days old, he first made little noises, without any meaning, to please himself, and these soon became varied." The English naturalist has correctly observed that after some time the nature of these cries differs "according to the cause, for instance, hunger or pain." He has fixed the time for this change: for one infant, eleven weeks, and a little more than eleven weeks for another. This means of communication seems very soon subordinated to the will. Early in that period "he seemed to learn how to cry voluntarily, or to wrinkle his face in the manner proper for the occasion, so as to show that he wanted something." Is there a transition from cry to voice, or does the latter appear simply at its physiological or psychological moment?

"At the age of five weeks," says Mr. Egger, "I noticed the transition from cry to voice. The cry is the first sound which the human organ produces; it starts from the base of the larynx, at the first moment of life in air and light. During several weeks it is the only sound that we hear from the infant, and that only when he is in pain. Later, towards the fifth week, I saw mouth and tongue move, especially through pleasurable impulses, to produce sounds which cannot be expressed through the letters of our alphabet, but which are certainly less guttural than the first sounds. This second kind of sounds, in becoming more perfect, produces true articulation." Mr. Egger makes an observation in regard to the voice of infants, whose correctness does not seem to me to be proved: "The voice of infants," he says, "at an early age is not characterized by any individual color or 'timbre.' The voice becomes characteristic at the same period when it becomes articulate, and it is then that we can distinguish in it vowels and consonants." Other observations seem to justify the influence that the infant's cry, as well as later the voice, has always peculiar modulations which mothers and nurses know well how to distinguish.

clearly distinguished sensations: "a dose of medicine was taken with visible repugnance; likewise the child distinguished between himself and external things by making for the first time an effort to seize an object by extending his hands and by bending his whole body." The same movements, more or less conscious, are observed in cats and dogs before the end of the first week; but little Tiedemann, as a child, seems to me to be very precocious in this respect.

The tendency to form ideas through sensations then shows itself visibly: "Before this time no object was followed for a long time; each was abandoned quickly at the sight of another: now, however, the glance accompanied them for some length of time; one could see that the eyes made an effort to seize the image." In this we find the first instances of curiosity, noticed at a later age by Darwin and by Taine.

At a month and twenty-seven days, the child seemed better able to distinguish his body from other things, for he no longer scratched himself; his curiosity developed, for he follows none but new objects with his

eyes (exaggerated); he recognises the expression of feelings, for he considers with greater attention the gestures of the people that are talking to him, and allows himself to become pacified by gentle words. He knows his activity: this is indicated by his gestures of joy, as well as by the fits of anger and the violence with which he pushes away disagreeable objects. "If any thing was disagreeable to him, the infant until then had shown it only by his tears and his resistance." We must remark contrary to Tiedemann's opinion, that the child at the age which is under discussion does not yet shed tears; to weep, in his case, means to cry. We notice also in his philosophical reflexions on the imperative intention of the tears of the infant a reproduction of Rousseau's ideas on this fact.

Third Month.—It must be said that there is here an absence of data or perhaps of precise observations: and the latter, after all, are of the greatest importance. The sensations which become more and more strong and vivid "strengthen the feelings: we perceive for the first time a strong emotion of

pleasure; heretofore a smile had been the sign of contentment; now it is replaced by a pronounced laugh. The feeling (ought he to use the word feeling here ?) of tickling shows itself, but only in the abdomen and not on the sole of the foot." Tiedemann ascribes this progress to the development and the comparison of ideas which render certain pleasant impressions more distinct. We should remember in regard to this the observation made by Darwin on his child when he was a week old, who withdrew his foot quickly when his father touched the sole of his foot with a piece of paper. When the child was two months and seventeen days old the teeth began to grow* and called forth, according to Tiedemann, new ideas and faculties: previous to this time the hands had been much less occupied than the eyes, but the pains in the mouth caused the child to put his fingers there continually, and also the objects which he had taken hold of; thus the child learned to grasp firmly, although with greatest uncertainty. As yet,

* Teething as a rule does not begin until seven or eight months after birth; in some instances it begins towards the fifth month. Perhaps Tiedemann's observation is incorrect.

the child did not grasp things that were at some distance from him; his movements were still prompted by instinctive desire, which showed itself in the bending of the whole body and the mechanical extension of the arm; these facts are recorded by Tiedemann, but placed at too early a period.

Fourth Month.—At three months and two days, "when the child grasped objects within his reach, he began to enjoy it." As soon as the children "perceive that the hands are the instruments of new ideas and, moreover, means of producing movements which occupy them in such a pleasant way, by bringing objects close to their organs of sight and taste, they exercise them more frequently and begin to play with what is given to them." We should observe here that the progress of the half-æsthetic enjoyment of play coincides with a growth in strength and skill in the organs which are its first instruments. At this time Tiedemann notices numerous examples of clear association of ideas.* While seated on his nurse's

* Darwin, while he notes the presence of practical reasoning in his son at the age of a hundred and ten days, when he

lap, the child, whenever he sees any one drink, turned toward the breast, even when it was covered, and made a movement with his mouth as if he were tasting something. In this last action, besides the ideas of purpose through which the child understands the use of the mouth, must we not recognize the effect of that natural motor—sympathy, which in beings gifted with the same organization gives birth so readily to imitation and calls forth what is similar at the sight of

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passed his hand along his father's finger to put it into his mouth, did not observe the unmistakable manifestation of an association of ideas in the mind of the child until the age of five months. For instance "whenever his hat and cloak were put on him, he became very cross if he was not taken out at once." At five months he sought his nurse with his eyes when he heard his name pronounced. This last date is very much nearer the truth than that of ten months which Mr. Taine mentions as the time when his daughter manifested this faculty. But Mr. Taine is right in maintaining that the association of ideas going on in the mind of an infant ten months old does hardly go beyond the range of animal intelligence, notwithstanding the fact that Darwin sees a marked difference between the aptitude of the little child and that of the most intelligent grown animal in regard to the forming of associations due to instruction and spontaneously produced associations. Does the dog which comes running from the rear of the garden whenever he hears the word *sugar*, show an inferior faculty of association compared with that of the child who turns his head to the right or left when he is told: *Move your head!*

the similar? Tiedemann noticed at the same period the first probable trace of dreaming; the child while sleeping "madê with his hand the movement of sucking."* In regard to this last point it seems to me as if Tiedemann's child which is so precocious otherwise, is behind the average child, which shows before this time that it dreams by its movements, its cries, the tone of its voice, the contractions of forehead and mouth and by sucking movements.

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* Mr. Egger assigns a still later period to actual dreaming. He did not notice it with certainty until the third year. "Emile, when he was three years and a half old, told us his pretended dreams; I did not venture to trust myself to his account because dreams had been frequently narrated in his presence and his account might have been a reminiscence or an imitation. But I could no longer doubt the reality of his dreams when I witnessed them myself—which happened from time to time. While he was entirely asleep, he imagined that he saw a cat close by, he called it or tried to chase it away. At another time I heard him wake up and say with an expression of grief: "I have lifted off the rock that hurt me. I am not going to die, mamma, am I?" The reserve with which these observations have been conducted is worth as much as the observations themselves. But has Mr. Egger not gone a little too far in it when he asks himself at what age dreams arise? Notwithstanding the obscurity which still surrounds these plain phenomena of animal life, analogy gives us a right to suppose that the child dreams as soon as it has distinct ideas, that is to say pretty soon after the time of birth.

I do not know whether we can agree with the interpretation which our philosopher gives of the following fact: "When the aggravated tooth-ache increased his desire for seizing with his mouth all kinds of objects for the purpose of biting them, the child knew already that distant objects could be brought near, but he did not know clearly that the hands should be used for that purpose, for he tried to seize near objects with his mouth instead of carrying them to his mouth with his hands." With a child who knows how to bring objects close to himself and still better how to carry them to his mouth, there must have been in this case the predominating influence of a very pressing idea and need, namely that of alleviating his tooth-ache without delay, and he tried to take hold of the remedy in what seemed to him the shortest way. Besides, even if there is no tooth-ache to excite him, the child at this age, as has been so well remarked by Rousseau, lives for his mouth only and tries to seize every object near him with this organ on account of his habit of examining things through taste. Once I followed, for

a quarter of an hour, a mother with a little girl six or seven months old on her arm, who was turning towards me but without paying attention to me and occupied herself incessantly to seize with her mouth the fluttering corner of her mother's veil.

Fifth Month.—I must here mention an important break and at the same time acknowledge the sincerity of the observer, although his sagacity seems to me to be at fault. "Up to the thirtieth of December nothing remarkable was observed." Does that mean that there was nothing to be observed? The contrary is certainly true. But let us pass this. "At that time it was noticed that he made use of his hands to take hold of a support. When after having been carried on the arm he was lowered suddenly he managed to take a firm hold with his hands to protect himself from falling, and it seemed disagreeable to him to be raised very high. He could have had no idea of a fall; his fear therefore could be nothing but a simple mechanical expression of the same kind that we feel on a specially precipitated height and which resembles dizziness

to some extent." Here we have a kind of emotion which cannot be described any better: but our author, as I can affirm in virtue of numerous experiments, is mistaken in regard to the time and the explanation. I have noticed the same signs of fright and "abhorrence of a vaccum" in dogs and cats only two weeks old, and even in cats that were still blind, when I lifted them in the air. There must be therefore some hereditary and unconscious influence in the emotions and aversions which are most frequent with beings whose destination is to live on the ground and not to float in the air. I have mentioned in another place that at the age of two or three years (I know the age from the date of the sojourn of my family in the house where I then lived) some person, I suppose my nurse, held me in her arms over the window-sill pretending to throw me out, and that I still retain a recollection of my terror.

"The child turned away from persons clothed in black with visible signs of repugnance: it seems therefore that black must have something disagreeable in its nature,

which explains why this color is elected when we dress for sad occasions. The child had by this time learned to use his hands for grasping and holding things. He could grasp anything now, but he still lacked sufficient practice therein. Singing always attracted his attention and he accompanied it, to express his pleasure, by jumping and moving his arms; but he was indifferent to whistling (which surprises me): it must have been therefore sound (and rhythm) alone which produced the impression. The sensations derived from taste were also tolerably distinct. He pushed a bitter medicine way from him with all his might, but he took wine and eatables with pleasure." Lastly, the absence of activity produced tediousness; but the least change made him forget even a tooth-ache; he produced all kinds of sounds without being induced to do so, and did not try to imitate* those produced in his pres-

* Darwin thinks that towards the fourth month he observed the child began to attempt imitating sounds, and that when the child was five months and a half old, he heard him articulate the sound "da," but without attaching any meaning to it.

Mr. Taine, in pleading the cause of his theory of inventive or re-inventive spontaneity which, according to him pre-

ence; this may be even on account of his having no clear idea of difference of sounds, or because his organs were not yet able to move according to his volition. Tiedemann is the first one who has expressed those ideas on the nature of the child's attempts at lan-

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ceded the work of assimilation, asserts that this unconscious prattle possesses an astonishing flexibility, and that all shades of emotion, astonishment, amusement, contrariness, and sadness are indicated by varieties of tone, and that in this respect the infant is the equal of, or surpasses the adult. Who is the fortunate observer who will succed in recording the mysterious phonetics of infantile life, which are no less difficult to seize than the warbling of the nightingale—in regard to which this result has been accomplished? Phonographic experiments interpreted by musicians, philologists, naturalists and psychologists would yield remarkable information.

Mr. Egger observes at a rather late epoch, in the middle of the sixth month, an evident instance of imitation, together with the act of recollection which it implies. Mr. Egger also attributes a large share of the first development of language to personal initiative. He notices at the age of six months non-voluntary activity of the voice with its infinite variations which form a kind of rough outline of sounds and of articulation. He sees in this an instinctive, natural language which is common to all times and to all peoples, and which becomes gradually restricted by the growth of another language, which is invented by each child and which is capable of endless individual variation. Mr. Egger and Mr. Taine have done very little towards noting down the forms of this individual language. Their observations are too general and vague to enable me to espouse or reject their hypothetical interpretation.

guage, which we have since seen reproduced or confirmed by Taine, Darwin, Egger, Pollock, etc.

At the age of four months and ten days "it was noticed that the child turned his face always exactly towards the direction from which a noise originated which he had heard before."

I noticed this fact at a later time. The activity increased visibly; in this state of watchfulness the limbs were in constant agitation. When the infant saw the breast he manifested his pleasure visibly; this seems to me rather tardy progress.

Sixth Month.—Here Tiedemann notices a growing desire to become acquainted himself and to increase his pastimes, which was manifested by the pleasure which the infant showed at the idea of being taken out into the open air, when his cloak was handed to the attendant. He seemed to prefer this girl to his mother except when he was hungry. He seemed also fonder of his toys because he knew better how to derive amusement from them, and he did not allow objects given to him to be taken away without cry-

ing. At the age of five months and a half the exclamation "ah" expressed for the first time his astonishment and his pleasure. (Tiedemann does not say whether he attributes this to imitation or spontaneous action). "He commenced also to make use of his legs in trying to walk, and manifested pleasure whenever he was placed on his feet." "He distinguished persons without having as yet very clear ideas about them. He distinguished very well between the different tones of voice which expressed different emotions and sentiments." Yet I suppose he had had for a long time that power of distinction in this respect which depends on the instinctive knowledge of the universal language, and which, in some way, is organic and structural in every human being.

Seventh Month.—The observations gathered during this month confine themselves to the following: On the fourteenth of March the infant began to articulate and repeat sounds. His mother pronounced the syllable "ma" for him; he looked attentively at her mouth and tried to repeat this syllable. Whenever he heard a word that was easy to

pronounce it was observed that he moved the lips as if trying to repeat it to himself.

Eighth Month.—Tidemeann observes, rather late, "visible signs of affection for persons whom he knew," and adds "he cried when he was made to believe that his mother or nurse was being whipped." Would he not have cried if he had seen other persons assume the appearance of beating each other?

I think that his tears might be explained by simple natural sympathy. Tiedemann noticed also that there appeared the association between the sign and the object. He calls this—I don't know why—the most difficult of all associations, one which the animal can but seldom attain, and never by its own efforts. This is an evident error. I can see no difference, from a mental point of view, between an animal and a child who both associate the ideas "sugar" or "meat" with the words which express those things. But there is a physiological difference in favor of the child in the fact that his organs enable him to imitate these sounds which are expressive for the animal and for man alike. As regards the progress in judg-

ment and comparison which the discriminating of articulation implies, Tiedemann very correctly speaks of them as of the conditions of spoken language; but these faculties are just as necessary for the understanding of the language which we hear, and for this reason they must have been active long before the age of eight months.

On the fifth day of the eighth month Tiedemann notes that the association of ideas was constantly increasing, and that it gave rise to complex sensations and desires. "In proof of this he mentions the fit of anger of his son when he saw another child placed, for a joke, on his mother's lap, and the efforts of the jealous child to draw the other away. Similar facts may be observed long before this period, even at the age of three months or three months and a half.*

* Darwin also declares it difficult to find a distinct sign of the feeling of anger during the first months. He believes, however, he observed one at about the age of two months and a half; it consisted in a slight frown on the forehead which lasted the whole time during which the infant was drinking milk which was a little cold. As far as my own observations are concerned, I think that I have observed very frequently at the end of the first month, if not earlier, signs of impatience in infants who refuse to take the breast of some nurse. But when Darwin's child was about four

Fourteenth Month.—There is but a single observation. The infant had as yet no idea of the fall of bodies from a height, nor of the difference between filled or empty space (a badly observed, or badly interpreted or badly reported fact). He wanted to throw himself down from any height (young animals who are still unused to jumping or flying do the same), and in several instances he let his cracker fall to the ground with the intention of stopping it (this indicates perhaps awkwardness just as much as an inexact —though not lacking—appreciation of distances).

Fifteenth Month.—Again but one observation. "When he had done anything by himself, for instance if he had given a certain movement to his toys, he was visibly pleased and took pleasure in repeating it." Tiedemann sees in this the highest degree of the activity and individuality of human nature; equivalent facts can be noticed however in all young animals; they enjoy and in a measure become proud of the development of their strength and skill. The following observation has more justice in it:

"The children enjoy doing by themselves that which they have been so far compelled to let others do for them; for this reason they want to take food with their own hands, and do not want to be touched when they are to be dressed or washed, etc."

Towards the same time appeared the signs of a sensibility which called into play the most complex feelings. "Affection and self-love had developed gradually into the feeling of honor: on the tenth of November he cried because his hand was rejected which he loved to tender as a sign of affection, and he showed visibly signs of grief when he was made to understand that he had done something wrong."

Sixteenth Month.—On the 27th of November he pronounced several words distinctly and knew their meaning, namely papa and mamma;* he did not use them, however, to

* At fourteen months, three weeks, the child which Mr. Taine observed understood several words and pronounced some while attaching to them their proper meaning: papa, mamma, tata (food), oua-oua (dog), dada (horse, wagon), coco (chicken), mia (puss, cat), etc. This incipient vocabulary offers to Mr. Taine an opportunity for the interesting demonstration of the child's ability to seize analogies and to enlarge the meaning of the names which we have given him.

call anybody, but rather almost accidentally without wishing to express anything by them. There were some sounds however which had a signification with the child, as for instance, "ha! ha!"; "indeed the sound *ha* seems naturally to express reflection to astonishment: It is produced by the sudden expulsion of suppressed breath, and it has been suppressed because the unexpected appearance of what is strange or bizarre arrests the course of

to imitate. Between the fifteenth and the seventeenth months the child understands the meaning and intonation of many phrases, but he has learned or invented very few new words. The principal words are: Pa (Paul), Babert (Gilbert), bebe (baby), baba (the goat), cola (chocolate), oua-oua (anything good to eat), ham (eat, I want to eat). The ground covered by each of these words is enlarged or restricted in proportion to the intellectual progress of the child. But from the very beginning and instinctively, says Mr. Taine, the child made them serve for general terms. The word "ham" is attributed to the child's own invention. "It is the vocal gesture of one who snaps at something; it begins with a guttural aspiration not far removed from a bark and ends in a closing of the lips as if the food had been seized and swallowed; a man would make the same sign if he found himself with bound hands among the savages and had only his vocal organs to express himself and wished to say that he would like to eat." The explanation is at least ingenious; I add to it that it has a scientific appearance and has seemed plausible to Mr. Darwin. The "ham" of Mr. Taine has with him the corresponding word "mum" (food, give me to eat), and he also attributes it to the child's initiative.

ideas which then suddenly take another direction." This physiological explanation may be of value; it is easy to verify its exactness. The child whose organs had not had sufficient exercise supplied by his gestures a substitute for the long words which he omitted. One could observe indications of this kind and they gave evidence of the coödination of ideas going on in him and allowed us to recognize a beginning of individual poetic force. He had been taught to reply to the questions "How tall are you?" by raising his hands in the air; he is asked to pronounce grandmamma, and, as if it were too difficult for him to pronounce *grand* he raised his hands and added the word "mamma."* Towards the middle of this month, his sight was "well trained in projective. He liked to look at images; he knew how to distinguish in the engravings objects which were familiar to him, although they were represented on a small scale."

* In German as well as in French the word for tall and the first syllable of the word grandmother are identical; "tall" is in French *grand*. Hence the child's attempt to express the first syllable in "grandmother" by the same gesture which he used to express how tall he was.

Seventeenth Month.—Sympathy and self-love developed more and more; he showed evident pleasure when a person laughed at his plays and when he was praised. He even tried to make people laugh by assuming various postures, for he already wanted to walk alone. This tendency to play the joke may be observed much earlier, as Darwin has remarked and as I have indicated myself. Likewise the other progress which Tiedemann has recorded during this period can be observed much earlier: the imitation of various sounds, the speaking of significant words, as for instance take, take, the pointing of the finger to known places, the ability to recognize his own image in the glass and even his efforts towards imitating phrases, which resulted in a "number of unintelligible sounds."

At this period his observation of new objects became more and more attentive and analytical; he understood a large number of phrases which he did not use himself; the desire for praise and for the approval of others increased.

Eighteenth Month.—I am astonished not to find at this period a record of the agreeable impression which light produces, and especially the sight of the moon or of the rays of the sun falling into the room.

Nineteenth Month.—Manifest progress in language; various objects called by name when he saw them but the nouns with several syllables pronounced with difficulty: usually the last syllables, or the accented ones are alone pronounced. "He did not seem to be able to pronounce well the consonants, z, sct, w, st, sp, or the diphthongs; the easiest consonants for him were p, t, k." "A more and more developed individuality manifested itself in the evident pleasure which he took in doing that which presented some difficulty: to get himself into a narrow corner, to put himself into dangerous positions, to carry heavy things, etc."

The greater the value of these observations and of those of the previous months, the more we must regret to find such a small number of them in Tiedemann's essay.

Twentieth Month.—"He could already pronounce words of two syllables, knew al-

most all the external parts of the body (which other children do at an earlier period); almost everything in the room was known to him by name."

Twenty-first Month.—Nothing recorded.

Twenty-second Month.—He began to put together several words in order to form a phrase composed of verb and subject; but he always used the infinitive in place of the imperative and nominative, the article was entirely omitted* (we should not forget the language which young Tiedemann had to practice in was German). Although he was ashamed when he had soiled himself, and knew how to ask to be cleaned, he had not yet sufficient command over his organs to avoid uncleanliness. "Jealousy and vanity developed more

* Mr. Egger has noticed at the twenty-eighth month, and Mr. Pollock at the twenty-fourth, the progress which consists in forming a phrase of three or four words. "Not open this" meant: the window is closed; "no curtain this," meant the window has no curtain. Mr. Egger, who, as I take it, is rather too fond of discovering in the child the characteristics of an inferior civilization, compares these awkward forms of child-speech to the elliptic idiom of the negroes "who borrow from the language of their masters but a limited number of the most necessary words, which they jumble together as necessity requires, without any regard to conjugation or even to syntax."

and more; when his little sister was being caressed, he came to be caressed also. He tried to take away from her what was given to her and even tried to strike her by stealth." These last traits are perfectly characteristic of this age, and even of the age of three or four years.

Twenty-third Month.—Tiedemann mentions a fact which to him indicates nothing but a well exercised memory, but in which we may see the incipient development of the moral sense, which with the child is the generalization of what he has done and what is done to him.

"On the 20th of July he came to a place of the house where he had been punished the preceding week because he had soiled it, and without further provocation he said at once that anyone who soiled the room gets a whipping."

This tendency to apply to others the law to which the child is subjected, is confirmed by one of my own recollections. I had been asked to look for a few minutes after an infant in the kitchen, in order to prevent it from touching any of the dishes which were

on the stove. I was holding the child on my knees: I wanted to see what was in one of the pots and lifted the cover; the child jumped immediately to the floor and in the tone of command said: "Don't touch this, it is for supper." I had been told to look after the child, but it was the child that looked after me.

Twenty-fourth Month.—The progress here noted in regard to memory and association of ideas seems of little importance to me: it consists of the words for duck and potato, pronounced spontaneously at the sight of those objects. The following observation is of higher value for it shows "how in a small brain, several ideas can arise and arrange themselves in a series, by its own power. The child had heard the story that a storm had killed a little girl: the expression of the face of the one who told this had made a deep impression on him so that at the next opportunity he tried to relate it, in words interspersed with changes of facial expression which could not indeed be understood

except by those who were present during the first narration."*

At the end of this month the child seemed to become attached more and more to his little sister and to a little dog, two objects formerly indifferent to him. I can understand that his sister may have called forth jealousy first; but I am astonished that a child of this age and even younger should not have interested himself in an animal from the very beginning.

From two years to two years and a half, he used cunning to be brought closer to the table where he could reach some eatables with his hands. He pretended that it was

* This is the germ of dramatic memory. Mr. Egger describes the first appearance of it in his son at the age of eight months. He "knew and recalled to his mind very well some persons he used to see in his walks in the Luxembourg Gardens, a nurse for instance and the child with her. He walked away from us one day, pronouncing fairly well the names of the gardens, of the nurse and the child. He went to the adjoining room as if he were saying good day to those two persons and then came back to tell us in the same simple manner of what he had done." There is in this, we may say, the first germ of the drama. But in order to explain this tendency—of which we find equivalents in the gambols of animals—we must go back to primitive ages whose principal phases of evolution the child for some reason or other is said to reproduce, by Mr. Egger as well as by Mr. Taine.

necessary for him, for some reason, to be seated on his high chair from which he could reach what was on the table. Tiedemann sees in this, signs of reflection and reasoning which, he erroneously says, are not found in animals. "The child was in the habit of calling his sister 'silly' when she did not do what he wanted. Thus," says Tiedemann, "his self-love manifested itself already in the comparison of others with himself." Is it not just as probable that the child had no exact idea of the meaning of the word, and that he repeated it mechanically to indicate his dissatisfaction, imitating that which had been used toward him?

"The child did not want his sister to sit in his chair or to put on any of his things; he called that his business." "Some vague idea of property had thus arisen in him." But although the child would not allow anyone to touch what was his own, he took what belonged to his sister quite readily.

"He admired himself and wanted to be admired in his attitudes or his new dresses. Even as early as the time of the birth of his sister he manifested signs of discontent; he

tried to strike her when she was in her mother's lap or in his own bed because it was disagreeable to him to see anything taken from him which he had enjoyed exclusive possession of for a long time." This observation, which is in every way correct, applies not only to this present age, but still more to the following age. A child three years old talked always about wishing to have a brother, and how he would love him. When a brother had been born, and when the child saw him absorb the attention and caresses of his parents, he became extremely jealous. He told his mother: "Mamma, won't little Lulu die soon?"*

At the same time Tiedemann noticed a fact which may be compared with a trait of similar kind related by Darwin, and which formed a valuable hint for reading the soul of the child. "He had been forbidden several times to touch any of the eatables except

* It must be remembered that the child who here uses the word die, as he does many others, has no idea of death. I suppose that the child who thus speaks of his little brother simply repeats, parrot-like, an expression which he has heard. For the child of Mr. Taine the idea of death did not extend beyond that of a broken head, for when his doll's head had become broken he was told it was dead.

what had been given to him expressly, but this prohibition had not deterred him very much. He had taken a little piece of sugar without having been seen; he stole into a corner where he could not be observed; his absence attracted attention; he was hunted after and found eating the sugar. Animals, when they once have been beaten, run away with their prey on account of the association of ideas, because they recall the chastisement. But this could not be the reason here, for he had never been punished. It must have been owing altogether to the reflection that he could eat the sugar if he was not observed, and that if he was seen the sugar would be taken away from him!"

When the child had mistaken a cloud for a rainbow, he was told that this was not a rainbow, and he replied: "Rainbow sleeps now." A watch was held close to his ear, and as soon as he heard it tick, he exclaimed that Fripon (a little dog) was shut up in it. These are but the imitations of examples given to the child, or that which belongs to the child himself in them is based everywhere on superficial reasoning and analogies.

When the child did not see the sun in the sky he said, "It has gone to bed; to-morrow it will get up and drink tea and eat a piece of bread and butter." All these judgments, says Tiedemann, arise in the child's reflections: but were they not rather the free developments of a judgment which had been taught: that the sun went to bed? The child's anthropomorphism is, I believe, to a great extent the work of education and the result of our metaphorical language.

At the age of two and a half years the moral sense of the child is fairly developed. "The child took in consideration the praise and blame of other persons without distinction. When he believed he had done something good, he would say: 'People will say, what a good boy.' When he was naughty and was told 'Our neighbor sees it,' he would stop at once." We regret that our judicious observer has not thought it proper to gather a greater number of observations in regard to the development of the moral sense in the child, which is both important and little known. But even the best observer leaves much for others to observe, and the exam-

ples and observations narrated by Tiedemann belong to those which waken and sustain emulation.

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Positions for Women Teachers.

The advance in the salaries of superior women-teachers has been of late years remarkable. Where the thought was once of the place, with a fixed salary because anybody could fill it, the thought is now of the kind of woman that can be got for the place, often with practically no limit to the salary. Prof. Payne, of Vanderbilt University, wrote to us in 1890 for a primary teacher at $1,200, with no duties outside of simply teaching a primary class three hours a day. The difficulty is not to find such places: it is to find the women who are sure to succeed in such places. Give us proof of superior ability, and you may be tolerably sure we can find the place for you. Some of the places for women we have filled are as follows:

At $1,500.—Principal High School, Des Moines, *Ia.*

At $1,200.—Buffalo Normal, *N. Y.*; Moorhead Normal, *Minn.*; Colorado Springs, *Colo.*

At $1,000.—Little Falls, Oneonta Normal, Saratoga Springs, *N. Y.*; Birmingham, *Ala.*; Marshalltown, *Ia.*; Ouray, *Col.*; Helena, *Mont.*; Cheney Normal, *Wash.*

At $900.—Auburn, *N. Y.*; Florence, *Ala.*; Grand Forks, *Dak.*; Colorado Springs, *Colo.*; Napa, *Cal.*

At $800.—Auburn, Elmira, Kingston, Newburgh, Norwich, Potsdam Normal, *N. Y.*; Birmingham, Florence, *Ala.*; St. Peter, *Minn.*; Ouray, *Col.*

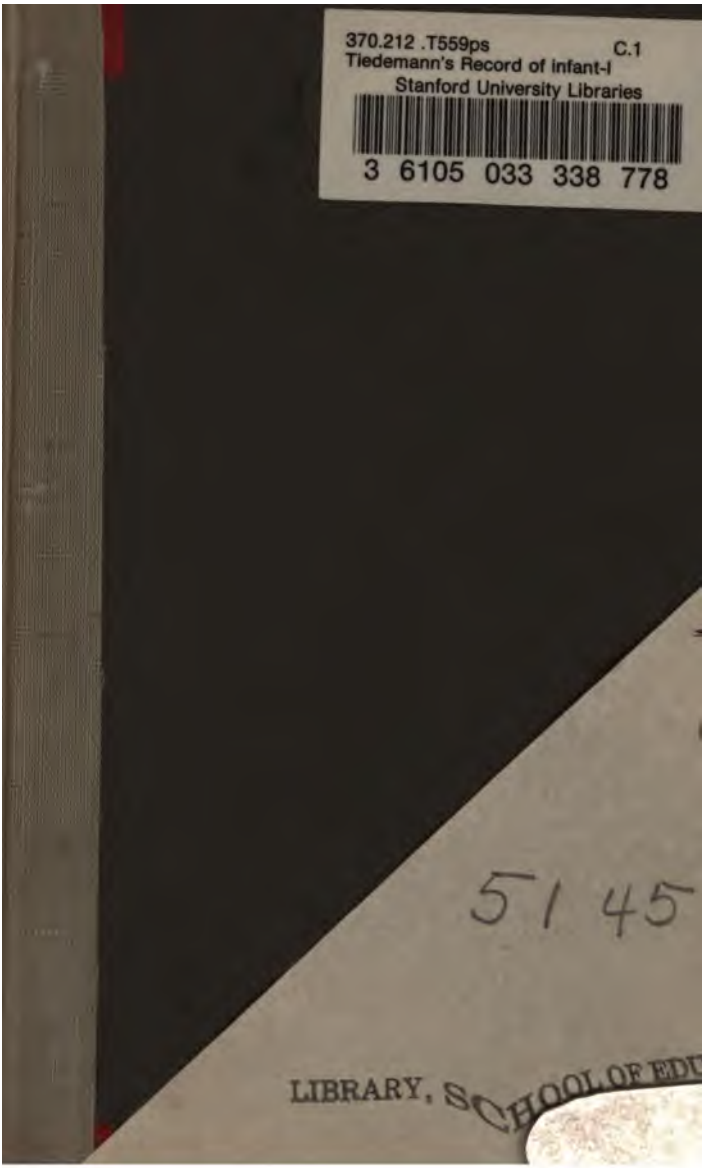
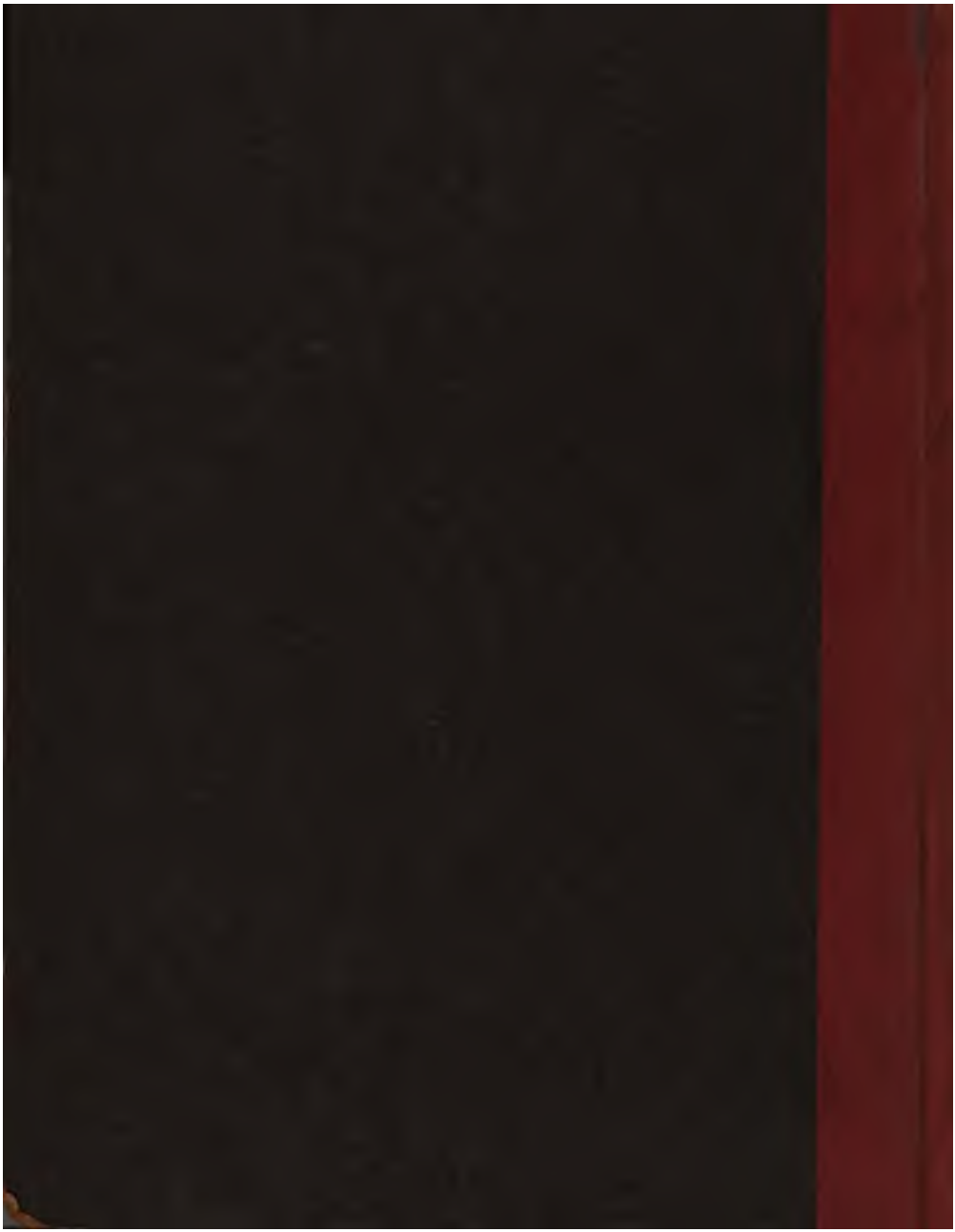
At $700.—Amsterdam Academy, Batavia [2], Dunkirk, Jamestown, Lyons, Oneonta Normal [3], Plattsburgh, Plattsburgh Normal, *N. Y.*; South Norwalk, *Ct.* [2], Oil City, Youngstown, *Pa.*; Ishpenning, *Mich.*; Fort Collins, *Ks.*; Tacoma, *Wash.*

At $600.—Batavia, Brockport Normal, Buffalo, College for Training of Teachers, Geneseo Normal, Glens Falls [2], Havana, Ilion, Newburg, Norwich, Ogdensburg, Palmyra, Phœnix, Port Henry, Salamanca, Watkins [2], *N. Y.*; Bennington, *Vt.*; Providence Normal, *R. I.*; Hartford, *Ct.*; East Orange, *N. J.* [2]; Florence, *Ala.*; Jacksonville, *Ill.*; Marshalltown, *Ia.*; St. Peter, *Minn.*; etc., etc.

It is often asked, what are the requirements for places like these? We reply that for high-school positions there is a growing demand for college graduates, while for primary and intermediate positions the preference is for normal graduates. Some schools have a regulation that normal graduates alone shall be employed in any department, but the tendency is to prefer college graduates for advanced positions. As a rule, however, graduation is only one of several important qualifications. We want *born teachers*, who have done and can do good work, whether they are graduates or not. Some of the best of these places were filled by women who were not even academy graduates. "First, a true *woman*; then a *lady*; then as much more as we can get," is our own standard of judgment, and it generally prevails.

How about experience? Well, experience helps, and for many positions is required. But there are places that do not pay for it or expect it. We can give a start to untried teachers who seem promising, if they won't expect more than inexperienced service will command.

C. W. BARDEEN, Manager, Syracuse, N. Y.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